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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,844	04/09/2004	Tetsuro Yamate	030486	8680
38834	7590	12/13/2006	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/820,844

Applicant(s)

YAMATE, TETSURO

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

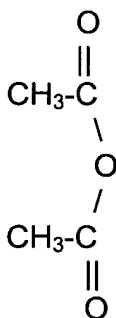
- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 5-16 are pending.

#### *Specification*

1. The disclosure is objected to because of the following informalities: the acetic anhydride structure on page 3 of the instant specification is improper for acetic anhydride and should provide the double bond between the carbonyl carbon and the carbonyl oxygen and a single bond to the anhydride oxygen, i.e.,



#### *Claim interpretation*

2. The claims employ the language: "included and "containing". Said terms have been interpreted to have the same scope as "comprising". See MPEP 2111.03. It is noted that none of the claims define any concentrations.

The claimed compositions, claims 5-9, set forth a proviso that "wherein the chemiluminescent composition induces chemiluminescence when being mixed with an oxidizing composition comprising hydrogen peroxide". The claims employ open transitional language, i.e., "comprising". Said compositions read on intermediate compositions employing both the oxalate/fluorescent component and the activator component since the addition of more activator would be expected to induce some

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chemiluminescence and the claims do not define the degree of extent said compositions induce the chemiluminescence.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 10-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear where applicants provide *ipso verba* basis for a device having separate components as now claimed in claims 10-16.

Original claim 1 does not define a device *per se*. Applicants have not point out the disclosure of a device and the examiner is unable to find the characterization of a device in the original specification disclosing compositions.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Omniglow Corporation, WO 94/19421. Omniglow Corporation (examples, tables and

claims) discloses the use of cetyl citrate esters with benzoates (WO '421, claims 1 and 6). The proviso statement of claim 5 does not distinguish the Omniglow reference since the claims employ open transitional language, i.e., "comprising". Said compositions read on intermediate compositions employing both the oxalate/fluorescent component and the activator component since the addition of more activator would be expected to induce some chemiluminescence and the claims do not define the degree of extent said compositions induce the chemiluminescence.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omniglow Corporation, WO 94/19421, as applied to claims 5-6 above, and further in view of Zweig et al, US 3,729,426; Roberts et al, US 3,701,738; and/or Crigg, US 3,560,395. Omniglow Corporation (examples, tables and claims) discloses the use of cetyl citrate esters with benzoates (WO '421, claims 1 and 6).

Omniglow Corporation differs from the claims in the use of acetyl citrate ester solvent system for the oxalate/fluorescent component or the use of ethylene glycol monoalkyl ether acetate or diethylene glycol monoalkyl ether acetate in claim 15 or ethylene glycol monobutyl ether acetate (also known as Butyl CELLOSOLVE® acetate)

or diethylene glycol monobutyl ether acetate (also known as Butyl Carbitol acetate) in claim 16 for the use of phthalate esters in the activator solution.

Omniglow Corporation (page 7, lines 16 et seq) disclose the oxalate/fluorescent component is generally diluted in a suitable solvent and said solvent systems may comprise a phthalate-free oxalate/fluorescent component for a completely phthalate-free chemiluminescent device. Omniglo specifically mentions but does not limit thereto the use of butyl benzoate as a preferred oxalate/fluorescent component solvent.

Omniglow Corporation (page 4, lines 17-22) disclose the phthalate free activators solutions employ solvents that possess good peroxide solubility.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the mutual solvent system for the activator and the oxalate/fluorescent component for the formation of a completely phthalate-free chemiluminescent device.

Zweig et al (abstract; column 7, lines 36 et seq; and column 9, lines 1-23) and Roberts et al (abstract; column 5, lines 34; and column 6, lines 4-25) disclose chemiluminescent compositions and suitable solvents therefore. Zweig et al (column 7, line 43; and column 9, lines 1-5 and 16-23) and Roberts et al (column 5, line 40; and column 6, lines 4-8 and 18-24) disclose the use of ethylene glycol monoalkyl acetate as typical solvent employed in the chemiluminescent system as well as ester solvents taught in the Omniglow reference as suitable solvents.

Crigg discloses aqueous peroxide compositions. Crigg (column 4, lines 18 et seq) discloses organic liquid solvents that may be employed in the peroxide solutions

include t-butyl alcohol, ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and Butyl "Carbitol" acetate among other solvents common to Omniglow Corporation, Zweig et al, and the Roberts et al references.

These references are combinable because they teach chemiluminescent compositions and solvents therefore. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ t-butyl alcohol with conventional ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and/or Butyl "Carbitol" acetate as obvious functional equivalent solvents in the Omniglow Corporation activator solutions for the advantage of producing a phthalate free peroxide activator solution.

Since the solvents were known in the art for use in either chemiluminescent systems and/or in conventionally known peroxide compositions, it would have been obvious to one having ordinary skill in the art at the time of applicants invention to employ said solvents as suitable solvent and/or diluents in the Omniglow Corporation peroxide activator or oxalate/fluorescent component solutions. While applicant's examples show the particular solvent system functions, applicant examples do not show the activator compositions to have unexpected properties. It is further noted that the claims are absent of any concentrations and would not exclude the use of mixtures, which at least the Omniglow reference clearly contemplates. Said claims would require only small amounts of the art disclosed solvents.

***Response to Arguments***

9. Applicant's arguments filed September 27, 2006 have been fully considered but they are not persuasive.

10. Applicants (page 6) assert the specification was objected to because the acetic anhydride structure on page 3 does not have a double bond between the carbonyl structure and oxygen. Said objection was stated that the the structure should have a double bond between the carbonyl carbon and the (carbonyl) oxygen. The amended structure does not represent acetic anhydride. See objection above.

11. Applicants' substituted specification has been entered.

12. Applicants (pages 7 and 8) assert the Omniglow reference lacks a teaching of the acetyl citrate esters and benzoates as part of the chemiluminescent component. Said arguments have been addressed in the above rejection and the Omniglow reference clearly teaches completely phthalate-free chemiluminescent devices with phthalate-free oxalate/fluorescent components.

Applicants (page 8) assert the Omniglow reference discloses suitable solvents but lacks a disclosure of acetyl citrate esters for the oxalate/fluorescent component. This has not been deemed persuasive since the Omniglow reference teaches completely phthalate-free chemiluminescent devices with phthalate-free oxalate/fluorescent components. The Omniglow reference teaches acetyl citrate esters as a component of the devices for the advantage of replacing the phthalates in the activator components. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the acetyl citrate esters as a component of



the oxalate/fluorescent component, which is to be combined with the activator for the advantageous reduction or elimination of the phthalate components to form a completely phthalate-free chemiluminescent device.

A *prima facie* case of obviousness having been presented, the burden shifts to applicants to come forward with objective evidence or reasoning in rebuttal of said *prima-facie* case. While applicant's examples show the particular solvent system functions, applicant examples do not show the activator compositions to have unexpected properties.

13. Applicants (page 8) arguments regarding the comparison of L, M, N, and O with V have not been deemed persuasive. Initially, unexpected results are not probative for anticipation. Some variation of results would have been expected and applicants have not shown said results to be unexpected. Furthermore, said results are not commensurate in scope with the claims and there is no indication why the skilled artisan would extrapolate applicants results in the examples to the scope of the claims.

14. Applicants (pages 8 and 9) assert the amendments and remarks place the claims in condition for allowance. This has not been deemed persuasive for the reasons set forth herein as addressed above.

### ***Conclusion***

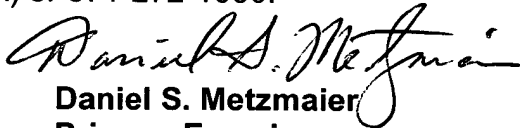
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**Daniel S. Metzmaier**  
**Primary Examiner**  
**Art Unit 1712**

DSM